

What is claimed is:

1. A rotation speed control apparatus of an open close body rotatably attached to a vehicle body so as to be freely opened  
5 and closed, comprising:

an opening and closing means having a motor for opening and closing the open close body;

a detector for detecting a position of the open close body;  
and

10 a controller for PWM controlling the motor, increasing a duty ratio of the PWM control according to a given increasing rate just after starting the motor, reducing the duty ratio to a given value by detecting a start of the open close body by means of the detector, and keeping the given value of the duty ratio for a given  
15 period.

2. A rotation speed control apparatus of claim 1, wherein the controller gradually increases the duty ratio applied to the motor from a given value according to a given rate, in the case that  
20 the controller discriminates that the rotation speed of the open close body reaches at most a given speed.

3. A rotation speed control apparatus of claim 1, wherein the open close body is provided with a latch apparatus to which a  
25 striker provided in the vehicle body is guided, and

wherein a detector for detecting an engaging state of the latch apparatus is provided within the latch apparatus.

4. A rotation speed control apparatus of claim 1, wherein the latch apparatus comprises a latch rotatably mounted to the latch apparatus; and a ratchet having a pawl portion being engaged with  
5 the latch and rotatably mounted to the latch apparatus, and

wherein the pawl portion of the ratchet and a half latch engagement portion of the latch are engaged in the case that the open close body is in a door ajar state,

and wherein, in the case that the open close body is in a  
10 door close state, the striker is engaged with an engagement groove of the latch, and the pawl portion of the ratchet and a full latch engagement portion of the latch are engaged.

5. A rotation speed control apparatus of claim 4, wherein the  
15 detector further comprises a first detecting apparatus for detecting the door ajar state, a second detecting apparatus for detecting the door close state, and a third detecting apparatus for detecting the state of the ratchet.

20 6. A rotation speed control apparatus of claim 1, wherein the detector comprises a rotary encoder.

7. A rotation speed control method of an open close body rotatably attached to a vehicle body so as to be freely opened  
25 and closed, comprising the steps of:

increasing a voltage applied to a motor driving the open close body step by step from an initial voltage;

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detecting a start of rotation of the open close body;

reducing the voltage applied to the motor to a given value  
and keeping the electric voltage constant until a rotation speed  
of a rear gate becomes smaller than a given target rotation speed;

5           increasing the voltage applied to the motor every given time;

keeping the voltage applied to the motor constant until the  
open close body reaches a given position; and  
stopping the motor at a time when the open close body reaches  
the given position.

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